REMARKS

As a preliminary matter, Applicants wish to thank the Examiner for thorough examination of the present application as evidenced in the final Office Action dated February 10, 2011.

Applicants have amended Claims 1, 6, 9, 13 and 17 and have canceled Claims 2 and 7. The amendment is based on the third paragraph on page 6, the second paragraph on page 7 of the description, the second and third paragraphs on page 8 of the description, previously presented Claim 2 and FIG.2. No new matter is added. Claims 1, 3-6, 8-20 remain pending upon entry of the above amendment. Reconsideration and allowance are respectfully requested.

Claim Rejections -35 USC§103

The Office Action rejected Claims 1-10, 12-15 and 17-19 under 35 U.S.C. 103(a) as being unpatentable over U.S Patent No. 6,950,441 B1 to Kaczmarczyk et al. in view of U.S Patent No. 6,363,424 B1 to Douglas et al.. Applicants respectfully traverse the rejection and submit that Claims 1-10, 12-15 and 17-19 conform to the provisions of 35 U.S.C. 103(a).

Claim 1:

Claim 1 of the present application recites:

"A Softswitch device for a Next Generation Network, characterized in that said Softswitch device implements an intelligent network service in the Next Generation Network, and said Softswitch device includes:

a network adaptive device located at a bottom layer of the Softswitch device, the network adaptive device for supporting standard protocols in said Next Generation Network, implementing communication between the Softswitch device and other devices in said Next Generation Network, as well as receiving call requests and sending data from higher layers of the Softswitch device to the Next Generation Network with required format and address;

a call server in a higher layer of the network adaptive device, the call server for determining whether the call received by said network adaptive device is a common call or a call of the intelligent network according to an accessing code of the call, and processing the common call, or when the call is determined as a call of the intelligent network, transmitting the call to an Intelligent Network Application Part (INAP), Customised Applications for Mobile network Enhanced Logic Application Part (CAP) or Mobile Application Part (MAP) adapter;

a resource manager in a higher layer of the network adaptive device, the resource manager for managing intelligent peripherals, performing audio interaction with a user through the call server, and transmitting the user input data to an Intelligent Network Application Part (INAP), Customised Applications for Mobile network Enhanced Logic Application Part (CAP)

or Mobile Application Part (MAP) adapter; and

the adapter in a higher layer of the call server and the resource manager, the adapter for responding to the call of the intelligent network and encoding or decoding an INAP message".

With reference to Kaczmarczyk et al. however, it mainly relates to a *system and method to internetwork telecommunication networks of different protocols. (Please see lines 11~13 in column 1 of Kaczmarczyk et al..)*

Comparing Claim 1 of the present application with Kaczmarczyk et al., Applicants respectfully submit that Claim 1 of the present application is distinguishable from Kaczmarczyk et al.. Claim 1 of the present application includes at least the following distinguishing technical features from Kaczmarczyk et al.:

1) "a resource manager in a higher layer of the network adaptive device, the resource manager for managing intelligent peripherals, performing audio interaction with a user through the call server, and transmitting the user input data to an Intelligent Network Application Part (INAP), Customised Applications for Mobile network Enhanced Logic Application Part (CAP) or Mobile Application Part (MAP) adapter"

It can be seen from the above that the resource manager in Claim 1 of the present application is for **performing audio interaction with a user through the call server. For example, when a SCP prompts a user to input interactive information, it is the resource manager that controls the interaction between the user and the audio resources** (please see the second paragraph on page 7 in the description for a detail). The audio resources are resources such as the prompt voice and so on (please see lines 7~8 of the third paragraph on page 8 in the description for a detail), and **the person skilled in the art would understand the audio resources are IP network resources**. Besides, the call server in Claim 1 of the present invention is for processing the common call and the adapter in Claim 1 of the present invention is for responding to the call of the intelligent network and encoding or decoding an INAP message, namely the call server and the adapter in Claim 1 is responsible for managing the circuit resources. **Thus according to above technical features in Claim 1, it can be seen that the resource manager in Claim 1 of the present application is responsible for the IP network resources, but not responsible for the circuit resources.**

In contrast, Kaczmarczyk et al. recites "The main responsibility of resource manager 142 is to *validate the incoming circuit, and to provide resource availability information for the outgoing call from the media switch*. Resource manager 142 is responsible *for maintaining circuit state and relative information, for all circuit-switched entities on the media switches*" (please see lines 26~30 in column 7 of Kaczmarczyk et al.), *which means that the resource manager in Kaczmarczyk et al. is responsible for the circuit resources of the media switch, such as the circuit is busy or the circuit is idle and so on, but the resource manager in Kaczmarczyk et al.* ***does not*** *relate to the IP network resources.*

Therefore, the resource manager in Claim 1 of the present application is distinguishable from the one in Kaczmarczyk et al. Kaczmarczyk at el. does not disclose "a resource manager in a higher layer of the network adaptive device, the resource manager for managing intelligent peripherals, performing audio interaction with a user through the call server, and transmitting the user input data to an Intelligent Network Application Part (INAP), Customised Applications for Mobile network Enhanced Logic Application Part (CAP) or Mobile Application Part (MAP) adapter".

2) "a call server in a higher layer of the network adaptive device, the call server for determining whether the call received by said network adaptive device is a common call or a call of the intelligent network according to an accessing code of the call, and processing the common call, or when the call is determined as a call of the intelligent network, transmitting the call to an Intelligent Network Application Part (INAP), Customised Applications for Mobile network Enhanced Logic Application Part (CAP) or Mobile Application Part (MAP) adapter"

It can be seen that the call server in Claim 1 of the present application is for determining whether the call received by said network adaptive device is a common call or a call of the intelligent network **according to an accessing code of the call**, processing the common call or transmitting a call of an Intelligent Network to an INAP, CAP or MAP adapter, which is a protocol adapter. That means the call server not only **enables the Softswitch device to process the common call, but also triggers a call of an intelligent network to a higher layer, and thereby enables the Softswitch device to process the call of an intelligent network. Besides, the call server can determine** whether the call received by said network adaptive device is a common call or a call of the intelligent network **according to an accessing code of the call**,

which is not a user profile.

In contrast, Kaczmarczyk et al. recites "Network directory server 144 *is responsible for managing user profiles*, such as access authorization, call barring, dial plan, etc. and *providing routing instruction for local and external (local number portability, 1-800) calls*. Network directory server 144 *is also operable to provide address resolution and translation, and accessing subscriber services (special tones and treatments) by sending requests to network functions elements 152 and subscriber services element 150*" (please see lines 38~48 in column 7 of Kaczmarczyk et al.). The person skilled in the art would understand according to the citation that *the Network directory server 144 in Kaczmarczyk et al. is for storing user profiles, which does not include accessing codes. An accessing code indicates the call is a call of the intelligent network, but does not indicate user profiles. Besides, the Network directory server 144 in Kaczmarczyk et al. is for providing* ***routing instruction*** *according to user profiles or providing address resolution and translation to get the address of the destinations.* ***The person skilled in the art would understand the Network directory server 144 in Kaczmarczyk et al. is for obtaining the address of the routing the called terminal, which is a complex address resolution, which cannot be done according to an accessing code.***

But **it is a simple determination that the call server in Claim 1 of the present application determines whether the call is a common call or a call of the intelligent network according to an accessing code of the call, which is simpler than the address resolution.** *Besides, the Network directory server 144 does* ***not*** *process the common call.*

Therefore, Kaczmarczyk at el. does not disclose "a call server in a higher layer of the network adaptive device, the call server for determining whether the call received by said network adaptive device is a common call or a call of the intelligent network according to an accessing code of the call, and processing the common call, or when the call is determined as a call of the intelligent network, transmitting the call to an Intelligent Network Application Part (INAP), Customised Applications for Mobile network Enhanced Logic Application Part (CAP) or Mobile Application Part (MAP) adapter".

3) "the adapter in a higher layer of the call server and the resource manager, the adapter for responding to the call of the intelligent network and encoding or decoding an INAP message" and "a network adaptive device located at a bottom layer of the Softswitch device, the network

adaptive device for supporting standard protocols in said Next Generation Network, as well as sending data from higher layers of the Softswitch device to the Next Generation Network with required format and address"

Firstly, Kaczmarczyk at el. does not disclose "the adapter in a higher layer of the call server and the resource manager, the adapter for responding to the call of the intelligent network and encoding or decoding an INAP message"

Besides, it can be seen from above that the network adaptive device in Claim 1 of the present application can support standard protocols in said Next Generation Network. A person skilled in the art would understand that the Next Generation Network have a plurality of protocols. Thus the network adaptive device in Claim 1 of the present application can support a plurality of protocols. And according to the technical features "sending data from higher layers of the Softswitch device to the Next Generation Network with required format and address" and "the adapter in a higher layer of the call server and the resource manager, the adapter for responding to the call of the intelligent network and encoding or decoding an INAP message", it can be seen that in Claim 1 of the present invention, the adapter in higher layer can process the call of the intelligent network in an uniform format "INAP message", and the network adaptive device in the bottom layer of the Softswitch device transforms the INAP into required formats and then sends the data to the Next Generation Network with required formats. Thus Claim 1 of the present invention provides a uniform format for messages of the adapter in higher layer, which simplifies the process of the call of the Intelligent Network in the higher layer.

In contrast, Kaczmarczyk at el. does not disclose how to process a call of the Intelligent Network, and the network gateway 146 and signaling agent 138 in Kaczmarczyk at el. does not have this function.

Therefore, Kaczmarczyk at el. does not disclose "the adapter in a higher layer of the call server and the resource manager, the adapter for responding to the call of the intelligent network and encoding or decoding an INAP message" and "a network adaptive device located at a bottom layer of the Softswitch device, the network adaptive device for supporting standard protocols in said Next Generation Network, as well as sending data from higher layers of the Softswitch device to the Next Generation Network with required format and address".

By the above distinguishing technical features, Claim 1 of the present application solves a

technical problem that **because of the essential differences in structures, principles and standards between traditional PSTN networks and the next generation networks, it is very difficult to realize the interconnection of intelligent network services between PSTN networks and the next generation networks**. (Please see the last two paragraphs of the "Technical Background" section on page 1~2 for a detail.)

With reference to Douglas et al. however, it mainly relates to *reuse of services between different domains using state machine mapping technique, which solves a problem of providing IN service access and reuse for IP end-point subscribers* (please see lines 59~60 in column 1 of Douglas et al.). Douglas at el. neither solves the above technical problem solved by Claim 1 of the present application nor offers a technical teaching of applying the above distinguishing features of Claim 1 to solve the above problem.

In particular, **the INAP, CAP or MAP adapter is a part of the Softswitch device in Claim 1 of the present application, and it is in a higher layer of the call server. So the process of responding to the call of the intelligent network and encoding or decoding an INAP message is done by the Softswitch device in Claim 1 of the present invention.**

In contrast, Douglas et al. recites "a *TCAP or INAP query is formatted by the **SSP*** and routed to the SCP for processing. …… The *SSP may choose to halt call processing until a response is received form the SCP*" (please see lines 62 in column 4 ~1 in column 5 of Douglas et al.) and "*The **SSP** can then decode the response and use the information within it as appropriate as it continues with call processing*" (Please see lines 42~44 in column 5 of Douglas et al.)*, which are already defined by ITU. From the above recitation of Douglas et al., it can be seen that the TCAP or INAP query is processed by SSP and SCP. The response is returned to SSP by SCP. And **SSP** decodes the response and processes the call. A person having ordinary skill in the art would understand that SSP and SCP are quite different from Softswitch device. So the above processes in Douglas et al. does **not** relate to Softswitch device.*

Therefore, the technical features the Intelligent Network Application Part (INAP), Customised Applications for Mobile network Enhanced Logic Application Part (CAP) or Mobile Application Part (MAP) adapter in a higher layer of the call server, the adapter is for responding to the call of the intelligent network and encoding or decoding an INAP message in Claim 1 of the present application is neither disclosed nor taught by Douglas et al.

The above distinguishing technical features of Claim 1 are not disclosed or taught by other document cited in the Office Action.

Zhang et al. (U.S Patent No 7,103,644 B1) discloses systems for an integrated data network converged service creation and execution environment (please see lines 10~13 in column 1 of Zhang et al.). Zhang at el. neither solves the above technical problem solved by Claim 1 of the present application nor offers a technical teaching of applying the above distinguishing features of Claim 1 to solve the above problem.

Those distinguishing technical features of Claim 1 are not common general knowledge.

Therefore, there is no teaching in the prior art as a whole that would have prompted a person having ordinary skill in the art, faced with the above technical problem, to modify or adapt Kaczmarczyk et al. in view of Douglas at el. while taking account of that teaching, thereby arriving at the technical solution of Claim 1 with the above distinguishing technical features. So Claim 1 is non-obvious to a person having ordinary skill in the art.

Thus Applicants respectfully submit that Claim 1 of the present application conforms to the provisions of 35 U.S.C. 103(a).

Claims 3-5:

Since Claim 1 conforms to the provisions of 35 U.S.C. 103(a), Claims 3-5 of the present application, which are dependent on Claim 1, also conform to the provisions of 35 U.S.C. 103(a).

Claim 6:

Claim 6 of the present application recites:

"A system for implementing an intelligent network, the system including a Softswitch device, at least one Service Control Point (SCP), an IP network and intelligent peripherals, the Softswitch device including a network adaptive device, a call server, a resource manager and an Intelligent Network Application Part (INAP), Customised Applications for Mobile network Enhanced Logic Application Part (CAP) or Mobile Application Part (MAP) adapter, wherein

the network adaptive device is located at a bottom layer of the Softswitch device, the network adaptive device is for supporting standard protocols in said Next Generation Network, implementing communication between the Softswitch device and other devices in said network, as well as receiving the call request and sending data from higher layers of the Softswitch device to the Next Generation Network with required format and address;

the call server is in a higher layer of the network adaptive device, the call server is for determining whether a call received by said network adaptive device is a common call or a call

of the intelligent network according to an accessing code of the call, and processing the common call, or when the call is determined as a call of the intelligent network, transmitting the call to the adapter;

the resource manager is in a higher layer of the network adaptive device, the resource manager is for managing intelligent peripherals, performing audio interaction with a user through the call server, and transmitting the user input data to the adapter;

the adapter is in a higher layer of the call server and the resource manager, the adapter is for responding to the call of the intelligent network and encoding or decoding the INAP message;

the at least one SCP is for executing intelligent service logic and producing INAP messages; and

the IP network is for connecting said Softswitch device and the SCP; and

the intelligent peripherals are for providing special resources required by the intelligent network services".

For reasons similar to those stated above for Claim 1, Applicants respectfully submit that Claim 6 of the present application is distinguishable from Kaczmarczyk at el. and includes at least the following distinguishing technical features:

1) "the resource manager is in a higher layer of the network adaptive device, the resource manager is for managing intelligent peripherals, performing audio interaction with a user through the call server, and transmitting the user input data to the adapter";

2) "the call server is in a higher layer of the network adaptive device, the call server is for determining whether a call received by said network adaptive device is a common call or a call of the intelligent network according to an accessing code of the call, and processing the common call, or when the call is determined as a call of the intelligent network, transmitting the call to the adapter";

3) "the adapter in a higher layer of the call server and the resource manager, the adapter for responding to the call of the intelligent network and encoding or decoding an INAP message" and "a network adaptive device located at a bottom layer of the Softswitch device, the network adaptive device for supporting standard protocols in said Next Generation Network, as well as sending data from higher layers of the Softswitch device to the Next Generation Network with required format and address".

By the distinguishing technical features, Claim 6 of the present application also solves the technical problem that **because of the essential differences in structures, principles and standards between traditional PSTN networks and the next generation networks, it is very difficult to realize the interconnection of intelligent network services between PSTN networks and the next generation networks**.

From the above analysis of Douglas at el., it can be seen that Douglas at el. neither solves the above technical problem solved by Claim 6 of the present application nor offers a technical teaching of applying the above distinguishing features of Claim 6 to solve the above problem.

The above distinguishing technical features of Claim 1 are not disclosed or taught by other document cited in the Office Action.

From the above analysis of Zhang et al., it can be seen that Zhang at el. neither solves the above technical problem solved by Claim 1 of the present application nor offers a technical teaching of applying the above distinguishing features of Claim 1 to solve the above problem.

Those distinguishing technical features of Claim 6 are not common general knowledge.

Therefore, the subject matter of Claim 6 is non-obvious to a person having ordinary skill in the art. Thus Applicants respectfully submit that Claim 6 of the present application conforms to the provisions of 35 U.S.C. 103(a).

Claim 8:

Since Claim 6 conforms to the provisions of 35 U.S.C. 103(a), Claim 8 of the present application, which is dependent on Claim 6, also conforms to the provisions of 35 U.S.C. 103(a).

Claim 9:

Claim 9 of the present application recites:

"A method for a PSTN telephone to access into an intelligent network service in a next generation network, wherein there is at least one SCP in said next generation network for executing the intelligent service logics, said method including:

issuing a call request from said PSTN telephone through dialing an accessing code;

a network adaptive device in a Softswitch device transforming said call request issued by said PSTN telephone into a protocol format suitable for the next generation network;

a call server in the Softswitch device determining whether said call request is an intelligent network service provided by the SCP or not according to an accessing code of the call,

when the call is determined as a call of the intelligent network, transmitting the call to an Intelligent Network Application Part (INAP), Customised Applications for Mobile network Enhanced Logic Application Part (CAP) or Mobile Application Part (MAP) adapter;

if said call request is an intelligent network service provided by the SCP, the adapter in the Softswitch device encoding said call request into an INAP message and transferring the message to said SCP;

responding to said INAP message and processing said call request by said SCP; and

a resource manager performing audio interaction with a user through the call server".

For at least reasons similar to those stated above for Claim 1, Applicants respectfully submit that compared with Kaczmarczyk et al., Claim 9 of the present application includes at least the following distinguishing technical features:

1) "a resource manager performing audio interaction with a user through the call server"

2) "a call server in the Softswitch device determining whether said call request is an intelligent network service provided by the SCP or not according to an accessing code of the call, when the call is determined as a call of the intelligent network, transmitting the call to an Intelligent Network Application Part (INAP), Customised Applications for Mobile network Enhanced Logic Application Part (CAP) or Mobile Application Part (MAP) adapter"

3) "if said call request is an intelligent network service provided by the SCP, the adapter in the Softswitch device encoding said call request into an INAP message and transferring the message to said SCP".

By the distinguishing technical features, Claim 9 of the present application also solves the technical problem that **because of the essential differences in structures, principles and standards between traditional PSTN networks and the next generation networks, it is very difficult to realize the interconnection of intelligent network services between PSTN networks and the next generation networks**.

From the above analysis of Douglas at el., it can be seen that Douglas at el. neither solves the above technical problem solved by Claim 9 of the present application nor offers a technical teaching of applying the above distinguishing features of Claim 9 to solve the above problem.

The above distinguishing technical features of Claim 1 are not disclosed or taught by other document cited in the Office Action.

From the above analysis of Zhang et al., it can be seen that Zhang at el. neither solves the above technical problem solved by Claim 1 of the present application nor offers a technical teaching of applying the above distinguishing features of Claim 1 to solve the above problem.

Those distinguishing technical features of Claim 9 are not common general knowledge.

Therefore, the subject matter of Claim 9 is non-obvious to a person having ordinary skill in the art. Thus Applicants respectfully submit that Claim 9 of the present application conforms to the provisions of 35 U.S.C. 103(a).

Claims 10 and 12:

Since Claim 9 conforms to the provisions of 35 U.S.C. 103(a), Claims 10 and 12 of the present application, which are dependent on Claim 9, also conform to the provisions of 35 U.S.C. 103(a).

Claim 13:

Claim 13 defines a method for a telephone in a next generation network to access into an intelligent network service in a PSTN network.

For at least reasons similar to those stated above for Claim 9, Applicants respectfully submit that Claim 13 also conforms to the provisions of 35 U.S.C. 103.

Claims 14 and 15:

Since Claim 13 conforms to the provisions of 35 U.S.C. 103(a), Claims 14 and 15 of the present application, which are dependent on Claim 13, also conform to the provisions of 35 U.S.C. 103(a).

Claim 17:

Claim 17 defines a method for a telephone in a next generation network to access into an intelligent network service in a PSTN network.

For at least reasons similar to those stated above for Claim 9, Applicants respectfully submit that Claim 17 also conforms to the provisions of 35 U.S.C. 103.

Claims 18 and 19:

Since Claim 17 conforms to the provisions of 35 U.S.C. 103(a), Claims 18 and 19 of the

present application, which are dependent on Claim 17, also conform to the provisions of 35 U.S.C. 103(a).

The Office Action rejected Claims 11, 16 and 20 under 35 U.S.C. 103(a) as being unpatentable over U.S Patent No. 6,950,441 B1 to Kaczmarczyk et al. in view of U.S Patent No. 6,363,424 B1 to Douglas et al. in further view of U.S Patent No 7,103,644 B1 to Zhang et al. Applicants respectfully traverse the rejection and submit that Claims 11, 16 and 20 conform to the provisions of 35 U.S.C. 103(a).

Claim 11:

Since Claim 10 conforms to the provisions of 35 U.S.C. 103(a) as stated above, Claim 11 of the present application, which is dependent on Claim 10, also conforms to the provisions of 35 U.S.C. 103(a).

Claim 16:

Since Claim 13 conforms to the provisions of 35 U.S.C. 103(a) as stated above, Claim 16 of the present application, which is dependent on Claim 13, also conforms to the provisions of 35 U.S.C. 103(a).

Claim 20:

Since Claim 19 conforms to the provisions of 35 U.S.C. 103(a) as stated above, Claim 20 of the present application, which is dependent on Claim 19, also conforms to the provisions of 35 U.S.C. 103(a).

Conclusion

In light of the above, the Applicants submit that the application is in condition for allowance and respectfully request that a Notice of Allowance be issued in this case. The Applicants also request that the Office telephone the attorneys of record in the event a telephone discussion would be helpful in advancing the prosecution of the present application.

Respectfully submitted,

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